

# Miniature

## → 83 160

- Nominal ratings up to 16 A/250 VAC
- Self-cleaning contacts
- 3 mm contact gap for type 83 160 6
- High DC switch rating for type 83 160 6 SP 3697
- Choice of actuators
- Approvals NF - UL (except 83 160 6 SP 3697)



### Main specifications

		Standard 83 160 0
<b>Function</b>	<b>Connections</b>	
I (changeover)	W3	
I (changeover)	W2 - W6 - X1 *	83 160 006
R (normally closed)	W2 - W3 - W6 - X1 *	●
C (normally open)	W2 - W3 - W6 - X1 *	●
<b>Electrical characteristics</b>		
Rating nominal / 250 V AC (A)		16
Rating thermal / 250 V AC (A)		20
Rating nominal / 250 V DC (A)		-
Rating thermal / 250 V DC (A)		-
<b>Mechanical characteristics</b>		
Maximum operating force (N)		4
Min. Release force (N)		1.5
Maximum total travel force (N)		6.5
Max. permitted overtravel force (N)		20
Rest position max. (mm)		15.6
Tripping point (mm)		14.8 <sup>+0.3</sup>
Maximum differential travel (mm)		0.3
Min. overtravel CRA (mm)		1.3
Ambient operating temperature (°C)		-20 → +125
Mechanical life for 2/3 CRA (operations)		10 <sup>7</sup>
Contact gap (mm)		1.2
Weight (g)		6.7
<b>Comments</b>		
* X1 for 83 160 6 and 83 160 6 SP 3697 : please consult us		

### Additional specifications

#### Components

##### Material

- Case : 83 160 0, 3, 4 and 6 polyamide UL94VO.
- Contacts : nickel silver

##### Lever

- stainless steel
- polyamide roller

Approvals : NF

### Product adaptations

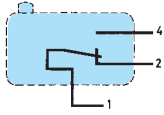


- Special levers
- Approvals : NF - UL for 83 160 6 SP 3697

To order, see page 12

## Principles

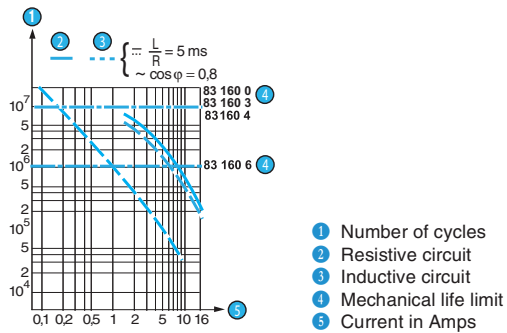
### Single break changeover switch



Reduced force 83 160 3	Low force 83 160 4	3 mm contact gap 83 160 6	High DC switch rating 83 160 6 SP 3697
<b>83 160 301</b>	<b>83 160 401</b>	•	•
•	•	•	•
•	•	•	•
10	6	16	-
15	10	20	-
-	-	-	5
-	-	-	5
2	1	5	5
0.6	0.3	1	1
3	1.5	7	7
20	20	20	20
15.6	15.6	15.7	15.7
14.8 <sup>+0.3</sup>	14.7 <sup>+0.3</sup>	14.6 <sup>+0.4</sup>	14.6 <sup>+0.4</sup>
0.4	0.35	0.7	0.7
1.3	1.3	1	1
-20 → +125	-20 → +125	-20 → +125	-20 → +125
10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>6</sup>	10 <sup>6</sup>
1.2	1.2	3.2	3.2
6.7	6.7	6.7	6.7

## Curves

### Operating curve for types 83 160 0 / 3 / 4 / 6



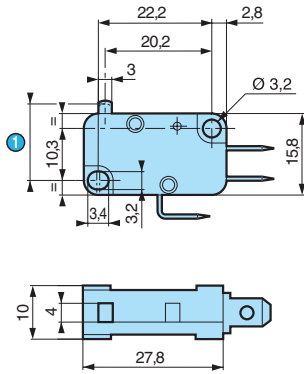
#### 83 160 6 SP 3697

at 250 VDC 1 A L/R 5 ms = 15000 cycles  
at 130 VDC 2.6 A L/R 5 ms = 15000 cycles

## Dimensions

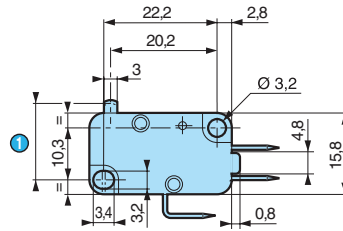
### → Product

83 160 0 / 3 / 4 / 6



① OL = 13.2 max.

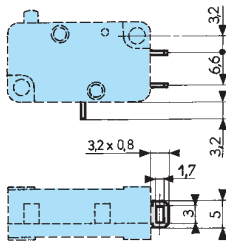
83 160 6 SP 3697



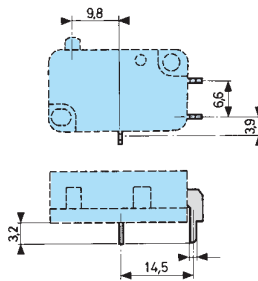
① OL = 13.2 max.

### → Connections

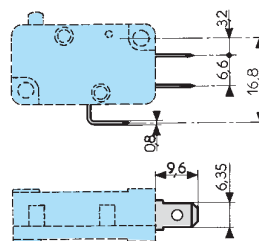
W2 solder



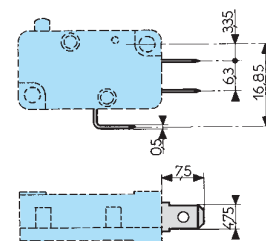
X1 printed circuit board



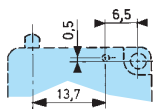
W3 for 6.35 mm clips



W6 for 4.75 mm clips

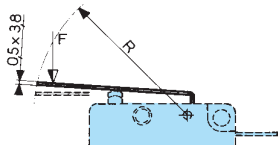


### → Actuator mounting positions

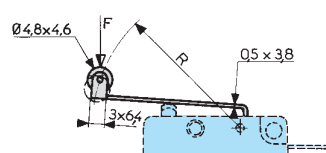


### → Actuators

153 AX



153 EX



## Actuators and fixing positions

### Part numbers for standard actuators

70 545 0 / 153 A F29.7

70 545 0 / 153 ER15,8

70 545 0 / 153 EF28.7

Actuators

Flat 153 AX F29.7

Roller 153 EX R15,8

Roller 153 EX F28.7



		831600	831603	831606	831600	831603	831606	831600	831603	831606
Fixing positions	mm	15,3 <sup>+0,05</sup>	15,3 <sup>+0,05</sup>	14,4 <sup>+0,06</sup>	20,5 <sup>+0,45</sup>	20,5 <sup>+0,45</sup>	20,3 <sup>+0,55</sup>	20,5 <sup>+0,65</sup>	20,5 <sup>+0,65</sup>	19,6 <sup>+0,75</sup>
Operating force - max.	N	2	1	2,6	4	2	5	2	1	2,6
Release force - min.	N	0,4	0,25	0,3	1	0,55	0,75	0,4	0,25	0,3
Pre-travel - max.	mm	2,5	2,5	3,1	1,2	1,2	1,4	2,5	2,5	3,1
Differential travel max.	mm	0,6	0,8	1,5	0,3	0,4	0,7	0,6	0,8	1,5
Total travel max.	mm	2,3	2,3	2,3	2,3	2,3	2,3	4,6	4,6	4,6

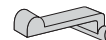
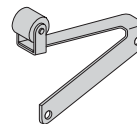
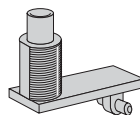
2-pole 153 A2\*\* R15,9

Dummy roller F\*\* F24.3

Telescopic plunger 153L\*\*  
(operating temperature 125°C max.)

Flexible with roller 153 B\*\*

153 V\*\*



\*\* Please consult us

## Other information

### Mounting - Operation

See basic technical concepts

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